

Notice of Allowability

Application No.

09/400,549

Examiner

Justin P. Misleh

Applicant(s)

NODA, HIROSHI

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to After-Final Amendment filed July 5, 2007.
2. ☒ The allowed claim(s) is/are 28 - 33 (now renumbered 1 - 6, respectively).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


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DETAILED ACTION

Allowable Subject Matter

1. **Claims 28 – 33 (now respectively renumbered 1 – 6)** are allowed.
2. The following is an Examiner's statement of reasons for allowance:

As for **Claims 28 and 31**, while the closest prior art teaches compensating for dark current by taking into account the abrupt changes in dark current noises within each interval by averaging of the dark current noise among a plurality of noise frames; however, the closest prior art does not teach or fairly suggest wherein said read-out unit reads out a photoelectric conversion signal accumulated in a pixel during a first accumulation duration in response to a sensor accumulation completion signal from a sensor representing the pixel, and wherein said operation unit calculates a noise correction value corresponding to the first and second noise components by using correction values corresponding to second and third noise components accumulated in the pixel during second and third accumulation durations, which are both set by a timer independently of the sensor accumulation completion signal.

As for **Claims 29 and 32**, while the closest prior art teaches compensating for dark current by taking into account the abrupt changes in dark current noises within each interval by averaging of the dark current noise among a plurality of noise frames; however, the closest prior art does not teach or fairly suggest wherein the second noise component comprises a fixed pattern noise component whose value is independent of the second accumulation duration and whose correction value is calculated from a value of the photoelectric conversion signal accumulated in the pixel during the second accumulation duration without modifying said value

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with a value of the second accumulation duration, and wherein the third noise component comprises a dark current noise component whose value is dependent upon the third accumulation duration and whose correction value calculated from a value of the photoelectric conversion signal accumulated in the pixel during the third accumulation duration by modifying the value of the photoelectric conversion signal accumulated in the pixel during the third accumulation duration using the value of the third accumulation duration.

3. Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lin Ye can be reached on 571.272.7372. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM

July 26, 2007



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